P. C. INGERSOLL.

HAND-POWER PRESS FOR BALING COTTON, &c.

No. 192,762. Patented July 3, 1877.

Fig. 1

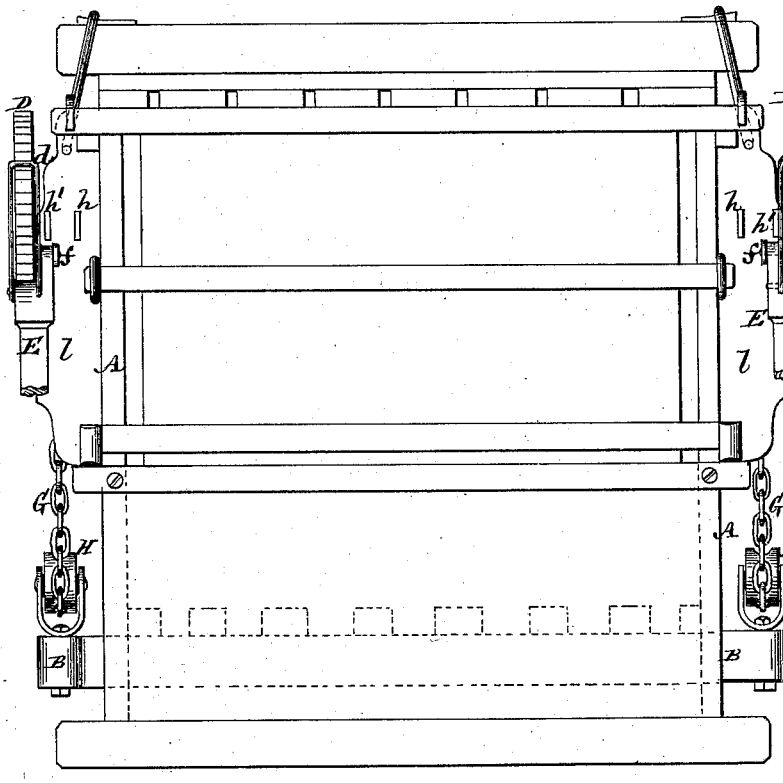


Fig. 2

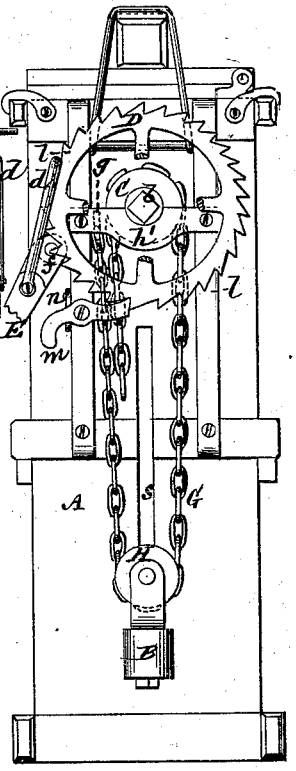
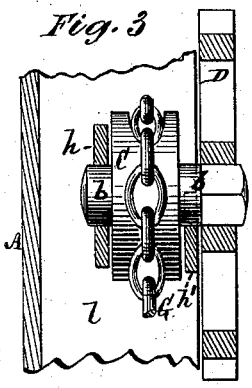


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

PLATT C. INGERSOLL, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND JAMES N. BALSTON, OF SAME PLACE.

IMPROVEMENT IN HAND POWER-PRESSES FOR BALING COTTON, &c.

Specification forming part of Letters Patent No. **192,762**, dated July 3, 1877; application filed May 8, 1877.

To all whom it may concern:

Be it known that I, PLATT C. INGERSOLL, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hand Power-Presses for Pressing and Baling Hay, Cotton, and other Substances, of which the following is a description, reference being had to the accompanying drawing, which forms part of this specification.

This invention is more especially designed to be applied to presses for baling hay, cotton, and other fibrous or flocculent materials; and it consists in certain combinations and constructions of the working parts of the press, whereby a combined lever and chain-tackle motion is used to work the follower with great advantage, both as regards the saving of room, the facility of putting together and taking apart the working details of the press, and in other respects.

Figure 1 represents a side elevation of a press constructed in accordance with my invention; Fig. 2, an end elevation thereof; and Fig. 3, a vertical section, upon a larger scale, through one of the operating ratchet-wheels, and upper portion of one end of the press, showing also the chain-pinion which is actuated by said wheel.

A is the frame of the press. It may be of the usual form, and consists, mainly, of a box or pressing-chamber, which is fitted with opening and closing sides, and an opening and closing upper lid or head. B is the draft-beam, which may be of metal, and which carries the follower, that, when pressure is being applied, is drawn upward toward the head of the box.

The means used for working the press, or lifting the draft-beam with its attached follower, are arranged at the ends of the frame, and are the same at both ends thereof. They consist, mainly, of upper pitched pinions C, having their axes at right angles with the ends of the box, operating ratchet-wheels D on the shafts or pivots *b* of said pinions, levers E having attached pawls *d*, for working the ratchet-wheels, lifting-chains G, permanently secured at their one end, passing under or round sheaves H on the ends of the draft-beam B, and up over the pinions C. Slots *s* are made in the ends of the box for the ends of the draft-beam to work through.

The levers E are arranged to work at right angles with the sides of the box of the press—that is, parallel with its ends—thereby allowing of the press to be worked within a space or room which is little or no larger than is necessary for the press to stand in, and to admit of its side lids or doors being opened. Said levers have their fulcrums *f* eccentric to or on one side of the axes of the ratchet-wheels D, and altogether independent of the latter, whereby the pawls *d* may be attached to their levers in such close proximity to the fulcrums of the latter that a very powerful leverage action may be obtained. The diameters of the ratchet-wheels D, also, may be such as to give considerable working leverage. The power thus obtained by the levers E and ratchet-wheels D is in addition to the doubling of the power as derived from the passage of the chains G over and under or round the pinions C and sheaves H. One end of each chain G of the chain tackles is secured by a hook, *g*, to the box or frame, or to the inner bearing *h* of the pinion-shaft *b*. This inner bearing, as also the outer one, *h'*, of each pinion, may be formed of plain plates or bars, secured or let into frame-pieces *l l*, attached to the ends of the box. Only the inner one, *h*, of said bearings may be a close one, and the outer bearing *h'* be left open at its top. The shafts *b* are of an angular form on their outer ends, to receive on or over them the ratchet-wheels D, which thus may be separately attached. This combination of the pitched chain-pinions, their bearings, the ratchet-wheels, and the chains facilitates construction, and the putting together and taking apart, also the repair of said details.

Applied to either ratchet-wheel D is a stop-pawl, *m*, to prevent back action when working the press. This pawl may be held out of gear by a catch or hook, *n*, when it is required to lower the follower or run the press back.

I claim—

In a baling-press, the pitched chain-pinions C, journaled at the ends of the box of the press near the top, the ratchet-wheels D, secured to the shafts of said pinions, and the working pawl-levers E, for operating the pinions, in combination with the actuating-chains G, passing over the pinions C, and extending downwardly and around the sheaves H on the follower-beam B, all adapted to operate substantially as set forth.

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